Assessment of Public Comment

BEACH Act Rule – Revisions to Parts 700, 703, and 890

Comment Period March 21, 2018 - June 12, 2018

Comment #1: General support and opposition

(Commenters 3, 4, 5, 6, 9, 10, 14, 15, 16, 17, 18, 19, 20, 21, 24, and 27)

- Commenters commended the Department of Environmental Conservation (hereafter "DEC" or the "Department") for proposing new water quality standards for some New York waterways; were encouraged by DEC's efforts to align state regulation with the standards in the federal Beaches Environmental Assessment and Coastal Health Act of 2000 (P.L. 106-284) (BEACH Act); and supported DEC's proposed amendments to 6 NYCRR § 703.4 that include enterococci and *E. coli* as bacteria indicators.

- Commenters contended that recent science confirms that enterococci and *E. coli* are more reliable indicators than fecal coliforms or total coliforms of pathogens that cause human illness, providing better public health protection in primary and secondary contact waterways.

- Commenters stated that adopting this fecal indicator bacteria (FIB) would also result in SPDES permit changes, triggering a new round of investment to update wastewater treatment facilities. These investments will directly improve water quality, protect public health and support the commercial shell fishing industry – an important source of jobs in many New York coastal communities.

- Commenters supported DEC's inclusion of a definition for "coastal recreation waters."

- Commenters supported the proposed reclassification of Class I waters of Upper and part of Lower New York Bay to Class SB, which commenters assert will incorporate primary contact recreation water quality standards into the protection of these water bodies, and increases the minimum Dissolved Oxygen (DO) level from 4.0 mg/L (Class I) to 4.8 mg/L.

- Commenter(s) asserted that the more stringent DO standard is needed to adequately support marine life and ecosystem health.

- One commenter supported the reclassification of Upper New York Bay and part of Lower New York Bay, but strongly disagrees with the averaging period and risk level that the Department proposed.

- One commenter supported the proposed reclassification based on improved water quality while preserving other Class I and Class SD use classifications elsewhere in New York City. The commenter specifically asserted that the reclassification illustrates the significant improvements in water quality that have occurred in these two coastal waterbodies. The commenter stated that they shared DEC's goals of improving water quality in and around New York City.

- One commenter specifically supported the application of the proposed enterococci water quality standards to Class SA coastal recreation waters year-round and to Class SB coastal recreation waters during the primary contact recreation season.

- One commenter asserted that DEC has correctly applied United States Environmental Protection Agency's (USEPA) Recreational Water Quality Criteria (RWQC) in a manner consistent with the BEACH Act.

- One commenter stated that exclusive reliance on fecal coliform and total coliform as FIBs is an outdated approach to protecting public health and supported the inclusion of the enterococci standard into State regulation.

- Commenters asserted that the proposed rule does not go far enough to protect people or wildlife from sewage pollution; and that the proposed changes may produce a higher standard in name only.

- Commenters acknowledged that pollution in New York waterways has been reduced considerably, but asserted that significant problems persist, including CSOs, where wastewater discharges directly into NYC's waterways.

Response to Comment 1:

DEC appreciates comments related to this rule, providing both support and critique. DEC thanks all commenters for providing insightful comments on the proposed rule. In response, the Department has made several revisions to the proposed rule, one of which (changing the averaging period from 90 to 30 days) may be considered substantial. The Department is issuing a notice of revised rule making and looks forward to receiving comment on the proposed revisions.

Comment #2: Scientific rationale in support of pathogen indicator change

(Commenter 16)

One commenter provided the following rationale to support a change in fecal indicator bacteria utilized by the Department: *E. coli* and enterococci are better indicators for fecal contamination than fecal coliforms because fecal coliform bacteria are commonly identified as being thermotolerant bacteria (able to grow at 44.5°C). Thermotolerant bacteria consist of the *E. coli*, Klebsiella, Enterobacter, and Citrobacter species. When testing for fecal coliforms, the population of the bacteria present can affect the fecal coliform results. For example: Klebsiella, Enterobacter, and Citrobacter species are false-positive indicators of fecal contamination as they are of nonfecal origin. It has been found that up to 15% of Klebsiella (nonfecal origin) are thermotolerant and up to 10% of *E. coli* are not thermotolerant, potentially causing an error rate of 25% when testing for fecal coliforms. *E. coli* is the only bacteria of the coliform bacteria group that comes from the intestinal tract and found to be more specific to the detection of fecal contamination, so much so that *E. coli* is the definitive indicator of fecal contamination in US drinking water regulations and is the recommended bacterial indicator for fecal contamination in recreational fresh water, as part of the 2012 USEPA Recreational Water Quality Criteria recommendations.

Within marine waters, studies show enterococci, as compared to other fecal contamination indicators, have a higher survival rate and show a direct association with risk of swimmer's illness.

The European Union (EU) uses enterococci as an indicator of fecal contamination for recreational waters as well as drinking water. Additionally, enterococci are recommended by the World Health Organization as a bacteria indicator for fecal contamination for recreational water.

Response to Comment 2:

DEC acknowledges and appreciates this detailed scientific comment in support of the fecal indicator bacteria selected by DEC in this rule.

Comment #3: DEC should adopt the more stringent of USEPA's two options for criteria

(Commenters 1, 4, 7, 9, 10, 11, 12 ,14, 15, 19, 21, 22, 23, 24)

Commenters asserted that DEC's adoption of the 36/1000 risk level (estimated illness rate), rather than the 32/1000 risk level (estimated illness rate), leaves a significantly higher number of people exposed to harmful bacteria and pathogens. Commenters acknowledged, however, that the 36/1000 risk level (estimated illness rate) is consistent with USEPA's 2012 RWQC. Nonetheless, commenters encouraged DEC to adopt standards associated with the 32/1000 risk level (estimated illness rate). In addition, some commenters asked that DEC provide an explanation for its selection of the 36/1000 risk level (estimated illness rate).

Response to Comment 3:

USEPA's 2012 RWQC provide two different estimated illness rates, or risk levels, with corresponding recommended criteria, both of which USEPA asserts are protective of public health. DEC has selected the 36/1000 risk level (estimated illness rate), as opposed to the 32/1000 risk level (estimated illness rate) to be consistent with the USEPA promulgated standards found under 40 C.F.R. § 131.41 (Bacteriological criteria for those states not complying with Clean Water Act section 303(i)(1)(A)). This regulation sets forth the standards that USEPA adopted in 2004 for coastal recreation waters in certain states, including New York. In selecting the 36/1000 risk level (estimated illness rate), DEC is consistent with this prior USEPA rule.

Comment #4: Application of multiple pathogen standards for SB waters

(Commenter 3)

One commenter asked DEC to clarify whether DEC intends to apply the two bacterial standards for Class SB coastal recreation waters or whether the enterococci standard will replace total coliform and fecal coliform that are applicable to SB waters generally. The commenter requested that, to avoid sampling for two bacterial indicators, for SB coastal recreation waters the applicable standard should be for enterococci only and that any future water quality based effluent limits (WQBEL) for enterococci should replace the current effluent limits for fecal coliform in the New York City's SPDES permits for the applicable WWTPs during the recreational season.

Response to Comment 4:

DEC is not repealing the existing total and fecal coliform standards. The method for implementation of the standards into SPDES permits as limitations would be determined following adoption of the criteria. At this time, DEC has not determined whether the standards would be included in SPDES permits in lieu of or in addition to coliform standards; however, it is DEC's goal to avoid unnecessary duplication.

Comment 5: Averaging period for standards should be 30 rather than 90 days

(Commenters 1, 4, 6, 7, 8, 9, 11, 12, 13, 14, 15, 18, 19, 21, 22, 24, 25, 27)

Many commenters stated that the standards should be applied over a 30-day averaging period instead of the proposed 90-day averaging period. Commenters also asked that DEC provide its rationale for selecting the 90-day averaging period. Commenters noted that the USEPA's 2012 RWQC specifies a maximum 30-day averaging period, after originally considering and rejecting an averaging period of up to 3 months. Commenters further noted that the 30-day averaging period provides greater protection against spikes in bacteria concentrations, so that spikes in bacteria concentrations that occur after a rainfall are not so easily "averaged-out" by other samples taken over a long period of time.

One commenter suggested that a pathogen standard with a 90-day averaging period that omits some of the wettest months of the year (March-April) is likely to make water quality appear better than it is, preventing oversight that could result in true improvement. The commenter further suggested that the northeast region is projected to experience a disproportionate increase in precipitation in winter months because of climate change, and that these impacts may be amplified in future decades.

At least one commenter noted that the New York State Department of Health's (DOH) standards, adopted 14 years ago, use a 30-day geometric mean for both enterococci and *E. coli*, and that DEC gave no reason for deviating from the DOH long-standing approach.

One commenter included a technical memorandum from an environmental scientist and university official from California. The technical memorandum included numerous references to studies related to protecting recreational waters. For example, the technical memorandum states that because FIB densities can vary substantially even in a given day (Boehm et al., 2002), and that lab samples can take +/- 24 hours to process, public health and regulatory agencies may provide stale information and lead to inaccurate health warning notifications even on the subsequent day of sampling collection (Leecaster and Weisberg, 2001). As such, monitoring recreational waters on an infrequent basis will not be protective of public health. In California, over 80% of the 529 monitored beaches are monitored on only a weekly basis, with no beaches monitored any less than weekly and some beaches monitored as frequently as five times a week (Chiu et al., 2015).

Response to Comment 5:

With public comment in support of a 30-day averaging period, DEC has reconsidered its initial selection of a 90-day averaging period, and has elected to revise the proposed rule to include a 30-day averaging period instead. In a 2015 document titled "Narrative Justification for Longer Duration Period for Recreational Water Quality Criteria," USEPA stated that a 90-day averaging period would be acceptable, but USEPA did not formally change the 2012 RWQC. USEPA's position remains that the 30-day averaging period is optimal. Considering USEPA's optimal averaging period, and in response to public comment

requesting DEC move to a 30-day averaging period, DEC has reconsidered its original proposal, and is now proposing a 30-day averaging period.

Changing to a 30-day averaging period involves no change to the regulatory impact assessment methodology used by DEC for the proposed rule, and thus no change to the DEC's regulatory impact statement (RIS) on this issue.

DEC would like to correct a common misconception among commenters; that is, that the proposed rule carried with it a sampling frequency requirement. The proposed standards do not contain any sampling frequency requirements. Standards are implemented through SPDES permits, and monitoring is conducted per protocols found in Department guidance.

See also, response to Comment 6.

Comment 6: Minimum number of samples

(Commenters 6, 7, 9, 10, 11, 12, 13, 14, 15, 18, 19, 24)

Commenters stated that DEC standards should specify a minimum number of samples, such as 5 samples in 30 days as specified in the existing DEC standards for coliforms. In addition, commenters noted that the proposed water quality criteria fail to specify a sampling frequency that ensures the criteria will be applied effectively. Commenters further noted that DOH's bacteriological indicator levels for enterococci and E. coli at bathing beaches also require a minimum of five samples within 30 days to determine compliance, and urged DEC to comport with DOH requirements.

Response to Comment 6:

The proposed standards are based on the USEPA's 2012 RWQC, which do not specify a minimum number of samples. USEPA's 2012 RWQC document states, in Section 3.6.5:

> "The number of samples, to be collected by a state in determining if WQS have been exceeded, is not an approvable element of a WQS package (Florida Public Interest Research Group vs. USEPA, 2007). Therefore, states should not include a minimum sample size as part of their criteria submission. When identifying sampling frequency as part of a state's monitoring plan, a state may consider that, typically, a larger dataset will more accurately characterize the water quality in a waterbody, which may result in more meaningful attainment determinations."

Some commenters compared this rule as proposed to DOH regulations. It should be noted that DOH and DEC serve different functions with regard to water quality assessment. DOH sets standards specifically for the monitoring of public bathing beaches, and as such has set forth a minimum number of samples for the particular purpose of protecting public bathing beaches. In setting water quality standards for ambient water, DEC does not impose, nor does USEPA recommend, such requirements in the standards, absent a particular application.

See also, response to Comment 5.

Comment 7: Sampling location and times

(Commenters # 6, 7, 8, 9, 10, 11, 13, 14, 15, 19, 24, 27)

Commenters noted that the proposed rule is silent on the monitoring locations for recreational waters, particularly those that are not bathing beaches. Commenters asserted that where the public uses waters for swimming, wading, or other recreational activities with a high probability of significant contact with the water, recreational water quality criteria can only protect public health if samples are collected from the most frequent points of public entry. Commenters asked that DEC require sampling locations near shore or at frequent points of entry to the water so that the results accurately reflect the conditions where people are most likely to come into contact with the waterway, rather than the center of the channel or farther from the shore that may fail to identify effects from local CSOs and polluted runoff. One commenter asserted that in addition to nearshore monitoring, the rule should specify that the monitoring occur in the morning, which is the time when FIB densities are often highest because ultraviolet disinfection from the sun hasn't had the opportunity to reduce FIB densities.

Response to Comment 7:

This rule proposes new water quality standards for pathogens and reclassifies and upgrades Upper New York Bay and a portion of Lower New York Bay. This rule does not specify sampling locations. DEC does not include sampling locations within its water quality standards or classification regulations. To determine whether sampling locations are appropriate, DEC is guided by its Consolidated Assessment and Listing Methodology (CALM). The assessment methodology found in the CALM addresses issues such as appropriate sampling methods, sampling location, sampling frequency or sample size, natural or background conditions, and mixing zones. This assessment methodology is used to ensure that data used by the Department is representative of the water quality of the waterbody as a whole.

Comment 8: 2012 RWQC should apply to all waters

(Commenters 1, 2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 27)

A number of commenters stated that the proposed rule should be extended to apply to all waters of New York State and not just the coastal recreation waters subject to the federal BEACH Act. Commenters asked DEC to explain why the proposed rule would not apply to all waters. Commenters noted that the public uses waters other than coastal recreation waters for recreation. Commenters also noted that waters not subject to the proposed rule would continue to be protected by the State's existing total and fecal coliform standards. Commenters further noted that having different criteria for estuary waters and streams that flow into marine waters will create an unnecessarily confusing and complex management situation. At least one commenter suggested that the statewide adoption of enterococci and *E. coli* standards for all NYS waters would provide continuity of data with surrounding state-shared waters.

At least one commenter noted that enterococci should be used as the sole FIB for all waters of the state to provide greater comparability of water quality across the State and supported DEC's increased use of water quality monitoring data from outside sources such as NGOs and academia where enterococci is widely used. Another commenter further suggested that total and fecal coliforms should be removed from New York State's water quality standards altogether, noting that since the 1980's it has been well-known and documented that fecal coliforms are an inadequate indicator.

Response to Comment 8:

The proposed rule is designed to bring New York State's coastal recreation waters into compliance with the requirements of the Federal BEACH Act. DEC proposes to define "coastal recreation waters" under 6 NYCRR § 700.1 (a) (73) as follows:

> "the Great Lakes and marine coastal waters (including coastal estuaries) that are designated under section 303(c) of the federal Clean Water Act by the State for use for swimming, bathing, surfing, or similar water contact activities. Coastal recreation waters do not include inland waters or waters upstream of the mouth of a river or stream having an unimpeded natural connection with the Great Lakes or open marine waters."

With this rule, DEC is proposing enterococci and *E. coli* standards to protect primary contact recreation, such as swimming, bathing, surfing, or similar water contact activities in the coastal recreation waters of New York, as defined by the BEACH Act and this rule. DEC will continue to consider adoption of appropriate water quality standards and indicator bacteria in waters not covered by this rule making.

DEC would also like to clarify a misconception expressed by at least one commenter who stated that this rule did not apply to fresh surface waters. In fact, this rule does apply to the open waters of the Great Lakes within New York State, which fall within the definition of "coastal recreation waters" under the BEACH Act.

Comment 9: Pathogen standards should apply year-around

(Commenters 1, 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 18, 19, 20, 21, 22, 23, 24, 25, 27)

Commenters stated that the new pathogen standards should apply year-round, without exception, to protect those who recreate outside the primary contact recreation season of May 1 through October 31. Commenters also asked why the Department selected the May 1 through October 31 period for the primary contact recreation season.

Some commenters asserted that there is no indication in the 2012 RWQC that part-time primary contact recreation is acceptable, nor is there any justification in the proposed rulemaking documents for either the selection of the proposed season or for the ability to vary the season absent any meaningful criteria.

Commenters noted that limiting regulatory protection for recreation to a designated season of May 1 through October 31 will not afford protection of waters for primary contact activities for six months of the year, asserting that despite primary contact recreation being less frequent during the colder times of the year, there should still be the same level of human health protection in the off-season. Commenters asserted that the proposed plan to revert to existing State criteria, using the less protective FIBs (total and fecal coliform), in the off-season will be cumbersome and impractical for monitoring and management purposes, and less protective of public health.

Commenters urged DEC to adopt enterococci and *E. coli* as the only FIBs used to manage primary contact recreation waters and to use them year-round. These commenters asserted that a variable

primary contact recreation season will confuse and endanger those who use the water year-round, especially during the transitional weeks.

One commenter noted that the limitation of the criteria to a "recreation season" does not account for the concern, raised by scientists at an academic institution in New York State, that long-lived pathogenic microbes can accumulate in sediment, and become a source of exposure well after they were initially discharged. The commenter asserted that microbes in sediment may persist for long periods of time, making the sediment a reservoir for sewage-associated bacteria that can then be resuspended into the water column or encountered directly in the sediment.

Response to Comment 9:

DEC would like to clarify that USEPA's 2012 RWQC do not require states to adopt pathogen standards that apply year-round.

Public beaches in New York State are generally open from late May into September. DEC recommends that people swim at beaches with lifeguards on staff that are monitored pursuant to the regulations of the New York State Department of Health. The use of beaches or other areas for swimming when beaches are closed and or unguarded may be unsafe and is not recommended.

The Department selected May 1 to October 31 as the primary contact recreation season to protect water quality for public bathing during the typical beach season, with a protective buffer period on both the beginning and end of that season. The recreation that occurs outside of this period is much less frequent, is of limited duration, or is not primary contact recreation as defined in 6 NYCRR Part 700.

DEC implements protection of primary contact recreation through disinfection requirements in SPDES permits. The Department believes that this approach, implemented through the SPDES process, is protective of the primary contact recreation uses observed throughout the State, and is flexible enough to allow for expansion of the season on a case-by-case basis as necessary to protect human health.

Regarding the potential for bacteria to persist longer in sediment as opposed to when it is suspended in the water column, DEC has incorporated additional time both before and after the typical start and end of the primary contact recreation season as a buffer to protect coastal recreation waters.

DEC would also like to clarify that, pursuant to DEC policy (TOGS 1.3.3), DEC has traditionally implemented year-round disinfection into SPDES permits for publicly-owned treatment works that discharge to Class SA, A, AA, A-S, and AA-S, as well as those discharges into receiving bodies subject to the jurisdiction of the Interstate Environmental Commission (IEC). The proposed rule would not alter this practice.

Comment 10: The proposal weakens existing total and fecal coliform standards

(Commenters 6, 7, 9, 11, 12, 13, 14, 15, 19, 21, 22, 24, 27)

A number of commenters asserted that the proposal inappropriately weakens or rolls back existing standards for total and fecal coliform, as well as undermines the effectiveness of the proposed water quality standards for enterococci and *E. coli*. Commenters stated that the proposed rule would limit the applicability of existing standards to the primary contact recreational season, allowing DEC to

unilaterally shorten the defined May 1 through October 31 recreational season on a case-by-case basis, and that the proposed rule would also allow permittees to circumvent the strict procedures to obtain a variance from standards (including USEPA approval), based on a determination by DEC that "disinfection is not necessary to protect human health." Numerous commenters took issue with the definition of "primary contact recreation season," specifically the second clause of the sentence which would have allowed the Department to alter the season on a case-by-case basis.

Commenters suggested that the provision of the proposed rule providing that total and fecal coliform standards apply "unless the permitee can demonstrate to the satisfaction of the Department that disinfection is not necessary to protect human health" circumvents the existing variance procedure.

One commenter noted that exclusive reliance on total and fecal coliform bacteria as FIB is an outdated approach that is not scientifically defensible; however, continued use of total and fecal coliform as FIB in combination with enterococci and *E. coli* does help to protect human health and is scientifically sound.

Response to Comment 10:

Commenters asserting that this rule would weaken existing standards are mistaken. This rule would set forth new, more stringent standards for coastal recreation waters during the primary contact recreation season to protect primary contact recreation, and would not alter how DEC protects other waters or how DEC protects best usages other than primary contact recreation in coastal recreation waters, such as shellfishing for market purposes. This rule making would not weaken existing standards for total and fecal coliforms, as no change has been proposed to those standards. The Department has made revisions to the originally proposed express terms (6 NYCRR § 703.4 (e)) to clarify the situations in which the pathogen standards would apply. This language, found at proposed 6 NYCRR § 703.4(e), does not circumvent the existing variance procedure found at 6 NYCRR § 702.17 and, when implemented in permits would be subject to public review and comment.

Comment 11: Indiana standards

(Commenter 10)

One commenter noted that only one state in the Great Lakes region - Indiana - uses water quality criteria as protective as the USEPA's 2012 RWQC, although only during the recreational season, and that New York State should take this opportunity to become a model in the Great Lakes region, across the country, and a national leader in water quality standards and protections, by applying this standard to all primary contact recreation waters throughout the entire year.

Response to Comment 11:

Please refer to the responses to Comments 8 and 9.

Comment 12: Harlem and East Rivers and Flushing Bay are coastal recreation waters

(Commenters 9, 19)

Commenters asserted that the Harlem River and East River are tidal straits rather than rivers and thus must be included as coastal recreation waters under the BEACH Act, along with Flushing Bay.

Response to Comment 12:

These waters are not coastal recreation waters as defined under the BEACH Act or State law. Asserting that such waters are not rivers does not supersede 6 NYCRR Parts 935 and 890, which classify the Harlem River and East River as rivers. The Harlem River, East River, and any inland waters that connect to them are not coastal recreation waters and thus not covered under either the federal BEACH Act or this rule.

Comment 13: SPDES permits for private residences

(Commenter 26)

The commenter urges that DEC conduct additional outreach to private residences holding SPDES permits in the future. The commenter thanks DEC for maintaining contact with SPDES permit holders for private residential systems to allow for such feedback.

Response to Comment 13:

DEC appreciates the positive feedback and will consider the comment for the future.

Comment 14 – Questions and Comments from USEPA

(Commenter 2 - USEPA Region 2)

USEPA Comment 14a: Primary contact recreation as a seasonal use

USEPA asserts that regulatory requirements under 40 C.F.R. § 131.10 (f) state, "States may adopt seasonal uses as an alternative to reclassifying a waterbody or segment thereof to uses requiring less stringent water quality criteria. If seasonal uses are adopted, water quality criteria should be adjusted to reflect the seasonal uses, however, such criteria shall not preclude the attainment and maintenance of a more protective use in another season." Because DEC's use designations for primary contact recreation continue to be expressed as applicable year-round, USEPA is requesting that DEC clarify the criteria applicable to protect the primary contact recreation use for each of these water classes during the non-recreation season. If the DEC does not intend to protect the primary contact recreation use during the non-recreation season, USEPA asks DEC to clarify the use it intends to protect during the non-recreation season.

Response to USEPA Comment 14a:

This USEPA comment is partially correct in that the Department's existing regulations do not specify that primary contact recreation is a seasonal use; however, the absence of such a statement does not equate to a best use of year-round primary contact recreation. DEC has interpreted, and continues to interpret, "the best usage of primary contact recreation," found under 6 NYCRR Part 701, to be intrinsically seasonal. For example, DEC protects the best use of primary contact recreation seasonally pursuant to TOGS 1.3.3, implemented through the SPDES program.

The USEPA asked DEC to clarify the use it intends to protect during the non-recreation season. Outside of the primary contact recreation season, DEC does not protect for primary contact recreation, but it

does protect for other uses, including as a source of water supply for drinking, fishing, and shellfishing. In addition, certain waters subject to the jurisdiction of the IEC are required to disinfect year-round.

USEPA Comment 14b: Applicability of fecal indicator bacteria standards outside of primary contact recreation season

USEPA notes that DEC is also proposing to add language stating, "In any other instance where the Department determines it is necessary to protect human health" to § 703.4 (e). USEPA requested DEC clarify the intent of this language.

Response to USEPA Comment 14b:

As stated above, DEC intends for the proposed 6 NYCRR § 703.4 (e) to enhance the protections currently provided by 6 NYCRR § 703.4 (c) for total and fecal coliform standards. Under the existing 6 NYCRR § 703.4 (c), the Department specifies that the total and fecal coliform standards for Classes B, C, D, SB, SC, and I must be met "(1) when disinfection is required for SPDES permitted discharges directly into, or affecting the best usage of, the water; or (2) when the Department determines it necessary to protect human health." Under the proposed 6 NYCRR § 703.4 (e), the Department is enhancing the protection afforded by 6 NYCRR § 703.4 (c) and clarifying the situations in which the pathogen standards would apply. As discussed above, *E. coli* or enterococci standards would apply during the primary contact recreation season, which may be tailored on a case-by-case basis to protect the best usages of a specific water or to protect human health. See the response to Comment 9. Finally, in certain instances federal law, state law, or interstate compact may require the application of a certain pathogen standard during a certain period. For example, waters subject to IEC jurisdiction, under the auspices of an interstate compact, require year-round disinfection.

USEPA Comment 14c: Applicability of criteria for Class SA vs. SB waters

USEPA notes that both Class SA and Class SB waters are classified by DEC to include best usages of primary and secondary contact recreation. USEPA asks DEC to explain why the proposal limits the applicability of the criteria for Class SB waters as applicable only during the recreation season whereas the same criteria for Class SA waters apply year-round.

Response to USEPA Comment 14c:

USEPA is correct in noting that DEC has classified both Class SA and Class SB waters to include best usages of primary and secondary contact recreation. DEC notes that Class SA waters have an additional best use of shellfishing for market purposes which requires year-round protection from pathogens. Class SB waters do not have a best usage of shellfishing for market purposes. *See* 6 NYCRR §§ 701.10 and 703.4. For facilities discharging to Class SA waterbodies, the existing total coliform standard of 70 Most Probable Number (MPN) applies year-round, consistent with existing DEC regulation in 6 NYCRR Part 47, Certification of Shellfish Lands, and the National Shellfish Sanitation Program. Under the original proposed rule, DEC had elected to apply the enterococci standard year-round to be consistent with the application of the total coliform standard. DEC has re-evaluated the original proposal and revised the express terms of the proposed rule to apply the enterococci standard *seasonally* to Class SA as well as to Class SB coastal recreation waters to protect for primary contact recreation when appropriate. Similarly, DEC has revised the express terms of the proposed rule to apply the *E. coli* standard seasonally to Class A, A-Special, AA, AA-Special, as well as to Class B coastal recreation waters of the Great Lakes to protect for primary contact recreation.

USEPA Comment 14d: Expansion of primary contact recreation season

USEPA notes that in the proposed definition of "primary contact recreation season," DEC limits the ability for it to expand the primary contact recreation season "in order to protect the best usages." USEPA asks DEC to explain why the proposed rule does not provide the ability for it to expand the primary contact recreation season to protect the suitability of the waters for primary contact recreation.

Response to USEPA Comment 14d:

Both the current 6 NYCRR § 703.4 (c), and the proposed 6 NYCRR § 703.4 (e), allow DEC to tailor disinfection requirements on a case-by-case basis to protect both best usages and human health through the SPDES program.

As discussed in response to Comment 9, DEC defined "primary contact recreation season" to protect the best usage of swimming, with a buffer on both the beginning and end of the typical bathing beach season. For this reason, "primary contact recreation season," as proposed to be defined under 6 NYCRR § 700.1 (a)(74), only contemplates expansion of the primary contact recreation season to protect the best usage of swimming. Generally, public bathing beaches are sited in waters with a best usage of primary contact recreation, and therefore, DEC would only modify the "primary contact recreation season" if the modification related to waters with such a best usage.

USEPA Comment 14e: Rationale for primary contact recreation season dates

USEPA requests that DEC explain its rationale for proposing to define the primary contact recreation season as May 1 to October 31, including why this period is appropriate statewide.

Response to USEPA Comment 14e:

The Department selected the May 1 to October 31 period as the primary contact recreation season as described in the response to Comment 9.

USEPA Comment 14f: Rationale for addressing only the coastal recreation waters

USEPA asked why the state is proposing the 2012 RWQC for a subset of primary contact recreation waters (coastal recreation waters), and not for all primary contact recreation waters statewide.

Response to USEPA Comment 14f:

The proposed rule was designed to bring New York State's coastal recreation waters into compliance with the federal criteria requirements of the BEACH Act. With this rule, DEC is proposing enterococci and *E. coli* standards for all coastal recreation waters in New York as defined by the BEACH Act and this rule. DEC will continue to consider adoption of appropriate water quality standards and indicator bacteria in waters not covered by this rule making.

USEPA Comment 14g: Rationale for reclassification of Class I waters

USEPA asked DEC to explain its proposal to reclassify the waters of Upper and Lower New York Bay segments from Class I to Class SB in the light of DEC's Assessment of Public Comment for the Class I and SD rule making completed in 2015 that stated "[w]ith the adoption of DEC's rulemaking, the quality of all Class I and Class SD waters must be suitable for primary contact recreation. At that time, certain waters of New York will newly meet the definition for 'coastal recreation waters.' These are the Class I waters of Lower New York Bay, and Upper New York Bay, south of the southern tip of Manhattan (The Battery)."

USEPA requested that DEC explain why these two waters are being reclassified to Class SB where, as of the adoption of the 2015 rulemaking (adding the suitability requirement for primary contact recreation to these waters), DEC points out, these marine coastal waters are "designated" under 303(c) by New York State for "use" for swimming, bathing, surfing or similar water contact activities.

Response to USEPA Comment 14g:

The 2015 Class I and SD rule making did not revise the best usages of those waters. The best usages of those waters remained "secondary contact recreation and fishing," and "fishing," respectively. Therefore, reclassification of 6 NYCRR § 890.6 - Item Nos. 4 and 6 would be necessary to make them coastal recreation waters. The 2015 Class I and SD rule Assessment of Public Comment was in error on that point.

In evaluating the waters that would be defined as "coastal recreation waters," and covered by this rule, the Department identified two coastal waters, currently designated as Class I, that were not designated as having a best usage of primary contact recreation: Upper New York Bay (6 NYCRR § 890.6 - Item No. 6); and a portion of Lower New York Bay (6 NYCRR § 890.6 - Item No. 4). In 1985, the Department determined that these waters were unable to support a best usage of primary contact recreation. *See* Use Attainability Analysis of the New York Harbor Complex, August 1985, Page 17. Since that time, the water quality in the two water bodies proposed for reclassification has improved dramatically. *See* New York Harbor Water Quality Report, 2016. Considering the water quality improvements in these two waterbodies and that they are adjacent to numerous public beaches, the Department has determined that they should be reclassified from Class I to Class SB to designate the best usage as primary contact recreation. The proposed enterococci standards for primary contact recreation would apply to the reclassified waters, as well as a more stringent dissolved oxygen standard for Class SB waters.

Comment 15: Proposed rule falls short of NYS legislative policy

(Commenter 1)

One commenter expressed disappointment that the proposed rule fails to fully implement the RWQC's recommendations designed to protect human health in waters designated for primary contact recreation use, and that it falls short of the declared legislative policy as set forth in ECL § 1-0101(3)(b), of "guaranteeing that the widest range of beneficial uses of the environment is attained without risks to health or safety, unnecessary degradation or other undesirable or unintended consequences."

Response to Comment 15:

The proposed rule was designed to bring New York State's coastal recreation waters into compliance with the requirements of the BEACH Act. With this rule, DEC is proposing enterococci and *E. coli* standards for coastal recreation waters in New York as defined by the BEACH Act and this rule. DEC will continue to consider adoption of appropriate water quality standards and indicator bacteria in waters not covered by this rule making.

Comment 16: Continuous water systems not included in reclassification

(Commenter 4)

One commenter expressed concern that continuous water systems were not included in reclassification, for example the Hudson River, the Jamaica Bay Tributaries and embayments, etc. The commenter stated that all New York City waters should be classified as SA or SB for attaining primary contact recreational conditions, not just selected areas. Gateway National Recreation Area and NYC Parks already promote various water activities in lower classified waters. The commenter asserted that oversight should be in alignment with current usage and DEC needs to reclassify all NYC waters as SA or SB year-round.

Response to Comment 16:

The proposed rule was designed to bring New York State's coastal recreation waters into compliance with the requirements of the BEACH Act. With this rule, DEC is proposing enterococci and *E. coli* standards for coastal recreation waters in New York as defined by the BEACH Act and this rule. The public can submit petitions for reclassifications pursuant to 6 NYCRR Part 609 to reclassify waters from their current classifications.

Comment 17: Accessibility to laboratories for pathogen analysis

(Commenter 5)

One commenter expressed concern with the proposed rule because of limited access to laboratories that perform the analysis of enterococci and *E. coli*.

Response to Comment 17:

Among the 91 laboratories certified by the New York State Department of Health Environmental Laboratory Approval Program (ELAP) to perform fecal indicator bacteria testing in New York State, 54 are currently certified for enterococci and/or *E. coli*. Should this rule be adopted, permit modifications would be required, and a demand for enterococci and *E. coli* analyses in non-potable water would be created, resulting in additional laboratories becoming certified for these parameters.

Comment 18: Enterococci as an indicator

(Commenters 7, 11, 12, 25)

Several commenters asserted that enterococci is a better fecal indicator bacteria than *E. coli* because enterococci is comparable across fresh, salt, and brackish waters.

Response to Comment 18:

DEC selected *E. coli* as the fecal indicator bacteria for fresh coastal recreation water to remain consistent with the USEPA's promulgation in 2004 of *E. coli* standards for these waters under 40 C.F.R. § 131.41.

Comment 19: Bronx River

(Commenter 11)

One commenter asserted that the proposed rule would result in a variety of standards throughout the reach of the Bronx River.

Response to Comment 19:

This rule does not propose to modify the standards associated with the Bronx River as the Bronx River is not a coastal recreation water as defined in the federal BEACH Act and the proposed rule.

Comment 20: Enterococci and *E. coli* as the only fecal indicator bacteria

(Commenter 6)

One commenter urged DEC to adopt enterococci and *E. coli* as the only fecal indicator bacteria and to apply them year-round, noting that using less protective FIBs in the "off-season" will be cumbersome and impractical for monitoring and management purposes and less protective of public health.

Response to Comment 20:

DEC is not proposing to repeal its existing total and fecal coliform standards at this time. It should be noted that DEC's existing total and fecal coliform standards are currently used to protect waters for other uses, including as sources of drinking water or shellfishing for market purposes. The standards being proposed are derived to protect primary contact recreation uses.

Comment 21: Regulatory impact – Great Lakes

(Commenters 14, 17)

Commenters stated that DEC did not provide an analysis of the positive impact stronger standards would have on the recreational industry in the Great Lakes. Commenters further noted that although

Great Lakes municipal wastewater treatment facilities may need to spend more money to upgrade their treatment systems, there are numerous industries that rely on the clean and safe water of Lake Erie and Lake Ontario. Multibillion dollar industries have created jobs, and increased tourism and recreation around the use of New York's Great Lakes. These industries rely on the clean water of Lake Erie and Lake Ontario and stronger more protective standards will benefit these industries. Commenters stated that DEC must consider the cost of inaction and the impact it will have on tourism, fishing, recreational activities, and the economy built around recreation on the Great Lakes. One commenter noted that new testing and reporting parameters are being added to permits, which may have an additional cost.

Response to Comment 21:

Pursuant to the State Administrative Procedure Act, DEC is not obligated to consider the costs associated with not taking action or positive fiscal impacts of the proposed rule.

It is correct that DEC has determined a *de minimis* financial impact for fresh water dischargers affected by this rule. This determination, as stated in the RIS, came from a literary review that compared the ability of different disinfection technologies. DEC determined that given the nature of the organisms (fecal coliform and *E. coli*), treatment effectiveness of *E. coli* is typically equivalent to that of fecal coliform and, in some cases, is less demanding (lesser chemical dosing required).

However, in response to this comment the Department has re-examined the costs to include a quantification of the laboratory costs for analysis for *E. coli* for dischargers to the Great Lakes and of enterococci to marine coastal recreation waters. Additional costs of up to $281,970 may occur should DEC require facilities to sample and report both the proposed and existing standards. If DEC supplants fecal coliform in permits with *E. coli* or enterococci, there would be no additional analytical costs because the analytical costs for these indicators are the same. Although any additional costs are not certain, DEC has revised the regulatory impact statement (RIS) for this rule to reflect the possibility of increased costs.

Comment 22: Costs to New York City

(Commenter 3)

One commenter noted the following:

> "The estimated costs in the RIS may not reflect all of the potential costs to comply with the proposed rule. The proposed rule could have implications for 5 of NYC's 14 WWTPs [wastewater treatment plants]: the Coney Island, Rockaway, Jamaica, Owls Head and Oakwood Beach WWTPs, which all discharge to existing or newly reclassified SB coastal marine waters. If DEC intends to apply the new enterococcus criteria though development of a Water Quality Based Effluent Limit (WQBEL) at one or more of these WWTPs, it is difficult for the City to evaluate cost implications for any necessary future capital investments or operation and maintenance in the absence of that WQBEL. Cost implications for meeting any future WQBEL could vary greatly depending on the specific WWTP and the mixing zone assessment for the point source discharge to the receiving waterbody."

The commenter further stated:

> "In the absence of a WQBEL for the new standard, it is not entirely clear if the new standard will require the construction of new or the upgrade of existing dechlorination facilities. Cost implications for meeting any future WQBEL could vary greatly depending on the specific WWTP and any mixing zone assessment for such WWTP's treated effluent discharge to the receiving waterbody. However, based on DEP's experience, construction costs of either new UV disinfection or dechlorination facilities may be higher than DEC estimates of $512,676/MGD and $220,000/MGD respectively. O&M costs for both types of facility may also be higher than the $10,000 – 18,600/MGD per year estimated by DEC."

Response to Comment 22:

The proposed rule does not include potential WQBELs for point sources. A strategy for implementation of these standards into SPDES permits will be developed if the standards are adopted. Anticipated costs were developed by assuming that affected facilities would need to have at least chlorination and dechlorination to effectively meet the proposed standards and continue to meet the existing total residual chlorine (TRC) standard. DEC also considered that facilities may potentially utilize ultraviolet light (UV) for disinfection. DEC assumed that facilities would choose the most cost-effective project. This cost calculation method is intended to be conservative, given each site facility would likely tailor an approach to meet the proposed standard. As part of the NYC wastewater treatment plant (WWTP) evaluation, costs were derived for each facility (affected or not), then compared to the costs submitted in engineering reports for facilities that had conducted an engineering review. For those comparisons, the cost differentials between the engineering reports and the RIS were minimal and determined to be sufficiently conservative given the site-specific construction costs for NYC WWTPs.

Comment 23: Units for pathogen standards

(Commenter 16)

One commenter suggested revising the phrase "number of colony-forming units per 100 mL" in subdivisions (a) through (d) in proposed 6 NYCRR § 703.4 to "counts per 100 mL." The commenter stated that the unit describes the method the laboratory uses for bacterial detection. For example, the test result would be assigned either as MPN per 100 mL or colony forming units (CFU) per 100 mL, depending on what approved test method was used. The USEPA approves the use of different analytical methods, with results expressed in either MPN or CFU units. To enter an MPN value in a column called "CFU" would be using the incorrect unit. CFU and MPN are both estimates for the concentration of viable target bacteria within a water sample. These editorial changes would help ensure the water quality standards within 6 NYCRR § 703.4 are inclusive to all USEPA approved methods for bacteria detection.

Response to Comment 23:

DEC revised the express terms of the proposed rule accordingly. In the revised proposed rule, DEC changed the units for total and fecal coliform, enterococci, and *E. coli* to "number per 100 mL (colony forming units or most probable number)." This change is consistent with the units specified in the USEPA 2012 RWQC.

Comment 24: Sampling period

(Commenter 17)

One commenter asked if DEC intends for sampling to begin on May 1 and end October 31, in accordance with the primary contact recreation season. The commenter also asked when sampling should commence if compliance is required from May 1 through October 31.

Response to Comment 24:

The proposed rule defines the timeframe (the primary contact recreation season of May 1 through October 31) in which the proposed ambient water quality standards would apply. This rule does not include or suggest ambient sampling or permit monitoring requirements. Monitoring requirements for municipal wastewater treatment plants would be developed upon adoption of the proposed rule and would be implemented into SPDES permits upon modification and review.

Comment 25: Chemical interaction in permits

(Commenter 17)

One commenter stated that additional chemical treatment to meet bacterial limits could result in interaction with parameters in current SPDES permits, and provided the example that chlorine reacts with nitrogen to form cyanide. The commenter asked whether this was considered in rule development and permit conditions.

Response to Comment 25:

The Department has considered the effects of additional chemical treatment that may result from the bacteria limits that may be imposed in SPDES permits to comply with the proposed rule. While in some circumstances it is possible for chlorine to aid in the conversion of nitrogen compounds to form cyanide or cyanide byproducts, such a conversion is typically the result of chloramination or breakpoint chlorination disinfection processes. Neither chloramination nor breakpoint chlorination disinfection processes are used for wastewater disinfection in New York. Thus, increased chlorine dosing to meet the proposed standard is not expected to result in formation of cyanide.

Comment 26: Dual testing requirement for pathogen standards

(Commenter 17)

One commenter suggested that it may be necessary to amend NYS Law due to the requirement to sample and test for both fecal coliform and the new indicator organism (be it *E. coli* or enterococci). Replacing fecal coliform with *E. coli* or enterococci as the indicator organism for disinfection system performance, and not using both fecal coliform with *E. coli* or enterococci as FIBs, would keep bacterial testing and reporting requirements similar to where they are now.

Response to Comment 26:

Revision to the Environmental Conservation Law is not necessary for the adoption of this rule. DEC is not proposing to repeal the existing total and fecal coliform standards.

Comment 27: Proposed rule fails to meet Clean Water Act requirements

(Commenter 9)

One commenter asserted that the proposed rule does not meet the State's obligations under the CWA and its implementing regulations.

Response to Comment 27:

The proposed rule complies with the CWA and USEPA regulations and guidance documents.

Comment 28: Comment period and prior FOIL request

(Commenter 9)

One commenter noted that DEC did not reply to a Freedom of Information Law (FOIL) Request prior to the close of the comment period and asserted that the commenter reserves the right to submit additional comments on the Proposed Rule after DEC provides a full response to the FOIL. In addition, the commenter noted that the Combined Sewer Overflow Long Term Control Plan for Alley Creek and Little Neck Bay (Alley Creek/Little Neck Bay LTCP), which was approved by DEC on March 7, 2017, included the statement: "DEC has recently advised DEP that it will likely adopt the 30-day rolling GM for enterococci of 30 cfu/100mL, with a not-to-exceed the 90th percentile statistical threshold value (STV) of 110 cfu/100/mL, which is the USEPA Recommended Recreational Water Quality Criteria." The commenter noted that DEC has not provided an explanation for proposing a standard different than the criteria quoted above.

Response to Comment 28:

DEC did not extend the comment period in response to this request. DEC responded to this FOIL request. DEC further notes that statements made by regulated parties in plans submitted to the Department do not bind the agency.

Table of Commenters

Commenter Number	Commenter Organization	Commenter Name
1	NYS Assembly	Steve Englebright and Dan Quart (via email from Richard Murphy)
2	EPA	Javier Laureano
3	NYCDEP	Marcella Eckels
4	Gateway National Recreation Area (national park service)	Mark Ringenary
5	Riverhead Sewer District	Michael Reichel
6	Save the Sound	Tracy Brown
7	SWIM Coalition	
8	Waterfront Alliance	Kate Boicourt
9	Pace Environmental Litigation Clinic, Inc. for Riverkeeper, Inc.; Connecticut Fund for the Environment/Save the Sound; Natural Resources Defense Council, Inc.; and Waterkeeper Alliance, Inc.	Todd Ommen
10	Alliance for the Great Lakes (AGL)	Nate Drag
11	Bronx River Alliance	Michelle Luebke
12	Newtown Creek Alliance	Lisa Bloodgood
13	NYCH2O	Ryan Brenner
14	Citizens Campaign for the Environment (CCE)	Hanna Ring
15	NYC Friends of Clearwater and United for Action.	Edith Kantrowitz (Via email from Mevrian Thomas)
16	IDEXX Water	Jody Fromire
17	New York Water Environment Association (NYWEA)	Patricia Cerro-Reehil
18	Save the Sound	Peter Linderoth – oral testimony at hearing June 7 comment in hearing transcript
19	NRDC	Larry Levine – oral testimony at hearing June 7 comment in hearing transcript
20	Gowanus Dredgers Canoe Club	Eymund Diegel – oral testimony at hearing June 7 comment in hearing transcript
21	Riverkeeper	Erin Duran – oral testimony at hearing June 7 comment in hearing transcript
22	SWIM Coalition	Korin Tangtrakul – oral testimony at hearing June 7 comment in hearing transcript
23	Gowanus Canal Conservancy	Amy Motzny*– oral testimony at hearing June 7 *pending verification

		from transcript comment in hearing transcript
24	NYC Friends of Clearwater	Edith Kantrowitz – oral testimony at hearing June 7 comment in hearing transcript
25	NYCH2O	Matt Molina – oral testimony at hearing June 7 comment in hearing transcript
26	Citizen	Lynne King
27	Citizen Form Letter	Frank Dumlao Geraldine Flynn Bob Sorensen Jamie Ong Susan Brown-Mandel Fred Binkley Mark Handy Michael Perez Adam Cooperstock C. Kalamotousakis Nancy Ward Joan Dykes Mihaela K Pamela Danzig Saula Siegel Gwen Jurmark Marceline Tempesta Joseph O'Sullivan Carmela Pecone John Keiser James M. Kozlik Anne Marie Bucher Sabina Gross Patricia Aakre Audrey Huzenis Julie Fraad Julie Hoffer Claudia Block Anthony Trotta Thomas McGlinchey Moshe Sadofsky Molly Helfet Mark Sweeney Greg Benson Carl Tyndall Diedre Moderacki Barbara Mintz Justine King Anne King

		Richie Polgar Sharon Melady Roland Popa Robin K. Elkman Yvette Fernandez Lucille Nurkse Susan Cox Alison Sky Dariia Karaianu Dena Lenard Mercedes Armillas Alica Jena Matthew Hasday Maria Asteinza Denise Brown Pat Duran Erma Lewis Ruth Karpel Megan Ryan Deborah Carroll Sandra Dal Cais Sasha Silverstein Jane Young Marina Morrone Janet Forman Jacalyn Dinhofer Lisa Vasta Edward Butler Alexander Goasdove Jeanne Friedman Anita Brandariz Michael Neubauer Craig Meltzer Elizabeth Hegeman Malka Tischler Keltha McAulay Andrew Robbins Gina Santonas Ofra Biener Marc Outar Beverly Bullock Elizabeth Schwartz Maria Melian Joseph Rosta Lauren Chu – Miss Mermaid comments Bill Meyer Cristina Fiorillo

		Florence Kaczorowski John Wilson Ellen Fleishman Chris Washington Dinard Clarke Edith Kantrowitz (as private citizen; see also above; she also spoke at the hearing) Adam Kelly Joe Quirk Wendy Walters Arden Down Meredith Kent-Berman J. Patricia Connolly Jaswant Rai Nathalie Weeks Douglas Cooke James DiMunno Addie Smock Alan Sirvint Annie Katzman Richard Stern Dara Murray Jill McManus Gail Sullivan Shyama Orum Chris Pan Launois Susan McGowan Brad Kerr Mayelly Moreno Jane Halsey Lisa Darrigo Timon Malloy Sean Adams George Jackman Viana Tran Ellen Wolfe Tami Swartz Michael Owen Bonnie Bernstein Jack Pliskin Nora Gaines William Sharfman Madelaine Haberman Nina De Fels Joseph Connors Marilyn Kaggen Daniel Barclay

		Lisa Jernow Alice Winn Abby Grosslein Robert Puca Peter Wood Susan Downs Michael Heimbinder June Hurst Cathy Ann Alexandra Herzan Celia Imrey Monica Dietrich Catherine Miller Susan Didrichsen Jeff Freilich Barbara Thomas Elizabeth Long Joseph Guzman Natasha Lunn Rhoda Levine Melinda Alfano Bob Schneck Lily Mleczko Alix Keast Sandy J Michael Stocker Sandra Kaplan Karen Greenspan Sylvia Rodriguez Kimberly Kutch Mary McGeary Lauren Lichtman Pete Klosterman Marina Barry Iris Rochkind Elizabeth Ungar Clifford Provost Maria Paez Conlago Mark Phelan Michele Temple Kristin Boccafola Lobi RedHaw John Papandrea Kenneth Mechler Sheila Dempsey Joseph Lawson Nathanel Williams, Jr. John Greenfield

		Chris Hazynski Susan Baxter Jeannette Hassberg (handwritten, given to Judge McBride) Christine McVey (handwritten, given to Judge McBride) Talbott Katz (handwritten, given to Judge McBride) Brooke Dramer (handwritten, given to Judge McBride) Dave Stein (handwritten, given to Judge McBride) Phil Sauers (handwritten, given to Judge McBride) Forest Happel (handwritten, given to Judge McBride) Peter Pasco (handwritten, given to Judge McBride)